

THE Massachusetts Ship Canal.

The Commercial Value of the Undertaking.

MEMORANDUM

ADDRESSED TO MR. SANDFORD FLEMING, C. E.

BY

MR. WILLIAM J. PATTERSON, late Secretary of the Montreal
Board of Trade.

SHIPPING INTERESTS OF BOSTON.

The shipping interests of the City of Boston, Mass., are great and diversified. According to a recent official return, there were on 30th June 1884, 789 vessels of all kinds (sail and steam, wooden and iron) registered, enrolled, and licensed, for the home trade of Boston and Charlestown, including a carrying capacity of 261,837 tons. The foreign entries at the Custom House during the fiscal year ending 30th June, 1884 aggregated 1,548,191 tons of shipping; and the clearances 1,314,285 tons. There were entered and cleared from and to Ports South of Cape Cod during the fiscal year ending 30th June, 1885, coastwise 1,289 vessels of 1,374,169 tons; and foreign 1,034 vessels of 424,231 tons; total 2,323 vessels of 1,798,400 tons. These figures include 312 vessels engaged in trading with the Spanish West Indies; 195 with the British West Indies; 68 with South American Ports, and 92 with other Ports; much other tonnage moving coastwise under Customs regulations without record.

DANGEROUS NAVIGATION AT CAPE COD.

The hazardous nature of navigation incident to the Nantucket and Cape Cod shoals, has made the approaches to Boston harbour exceedingly dangerous to mariners; that part of the New England coast being considered by some navigators as second only in point of risk to the environs of Cape Horn. As might be expected therefore, where such dangers exist, and where so many vessels are seeking ingress and egress, there is a dark record of marine disasters connected with the shipping of Boston which has attracted much attention. For example, a report was made in 1860 to the Legislature of Massachusetts by a select Committee that had been appointed to enquire into a scheme to make a Ship Canal across the Cape Cod peninsula. That document contains some startling particulars about the wrecks that had been recorded.

OFFICIAL REPORT OF SHIPWRECKS.

It appears that during a term of seventeen years (from 1843 to 1859) there occurred in the vicinity of Cape Cod 827 marine disasters, of which 500 were total, and 327 partial losses. The amount of property lost was noted in 108 cases only out of the 500 total wrecks, but as they were fairly representative, an estimate may be made on that basis, which gives the total of \$8,500,000, or an average yearly loss of \$500,000; add to this the destruction of property occasioned by the 327 partial losses which was estimated at \$1,400,000, and it will appear that the total value of property destroyed by marine disasters in that vicinity during the period mentioned was \$9,900,000 or over \$582,000 yearly. Particulars of the loss of life were procurable in 72 cases only, whereby 320 hands were lost, but it may be calculated therefrom that some 2200 lives perished in the 500 total wrecks, being an average of 130 annually. A later report giving figures for the ten years following the period just noted, shows that from 1860 to 1869 there were 617 wrecks, of which 211 were total, and 406

partial losses; the value of the property destroyed thereby was not obtained.

LIFE AND PROPERTY SAVING ADVANTAGES OF THE CANAL.

The question of obviating at least to some extent, this great loss of human life and merchandize, has engaged a good deal of attention within the past quarter of a century; and proposals to construct a canal across the Cape Cod peninsula have received consideration at different times. The latest phase of that scheme, and one for which certain Corporators now hold a charter from the Legislature of Massachusetts, is to make a tidal ship canal of adequate capacity for vessels of large dimensions, to enable them to pass safely from Buzzards Bay across to Barnstable Bay, and thus avoid all the dangers and risks referred to; the amount of canalling between the two points being less than eight (8) miles.

REFERENCE TO ACCOMPANYING SKETCH MAP.

An examination of the accompanying sketch will materially assist in comprehending the whole question. The red lines are meant to show what the course of coast navigation will be by way of the proposed canal. The blue lines indicate respectively the inside and outside courses (in absence of the canal) according as the mariner chooses to hug the Cape, or to give a wide berth to it, and Nantucket. As compared with the route via the proposed canal, the excess of distance by the inside course is about 80 to 90 (say 85) miles; while the excess by the outside course is probably more than 200 miles, according as the cautious navigator may decide to keep seaward to lessen his danger.

RESULTS OF THE CANAL.

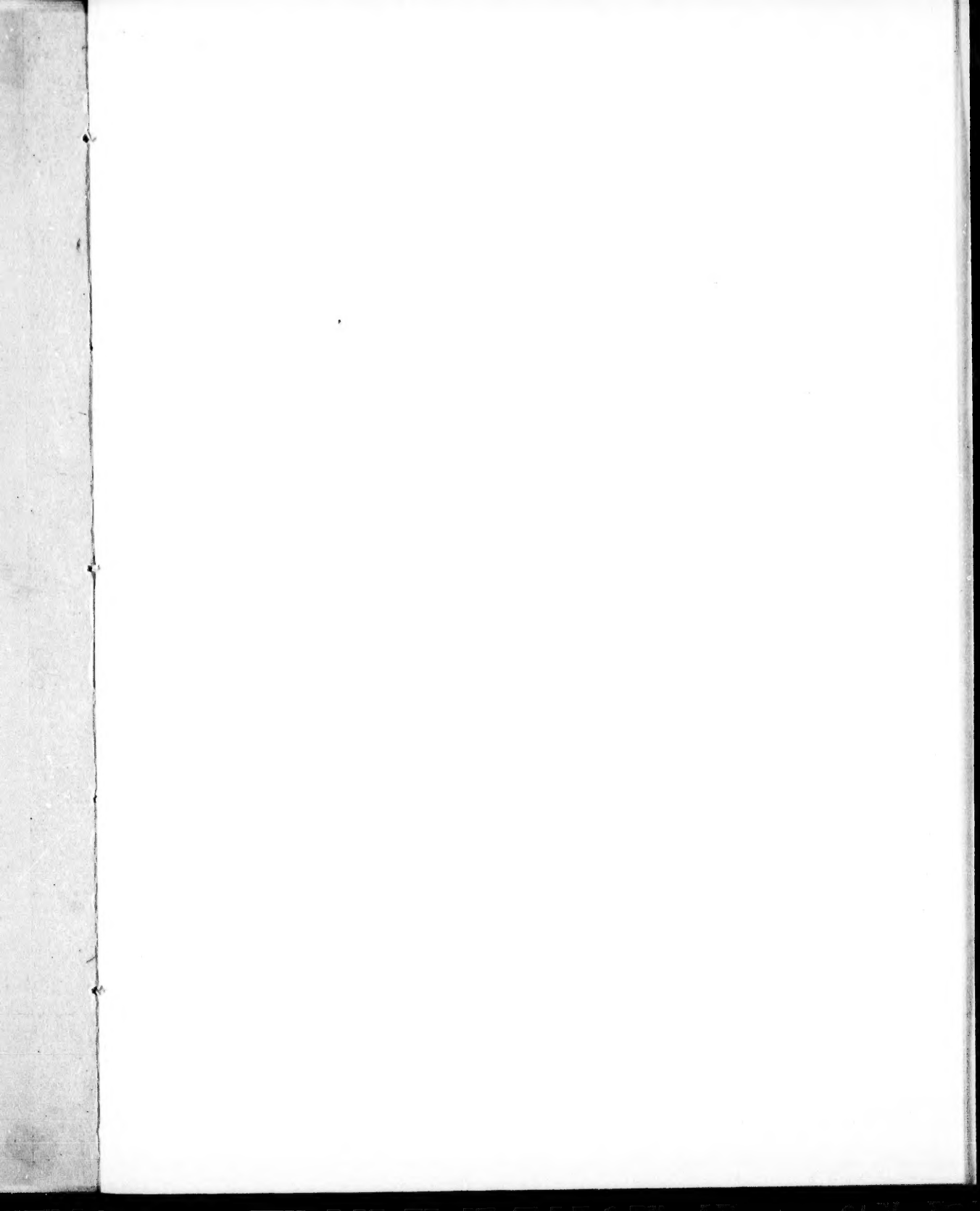
It will be evident from what follows that the canalling of the Cape Cod peninsula as now proposed will be of immense commercial value.

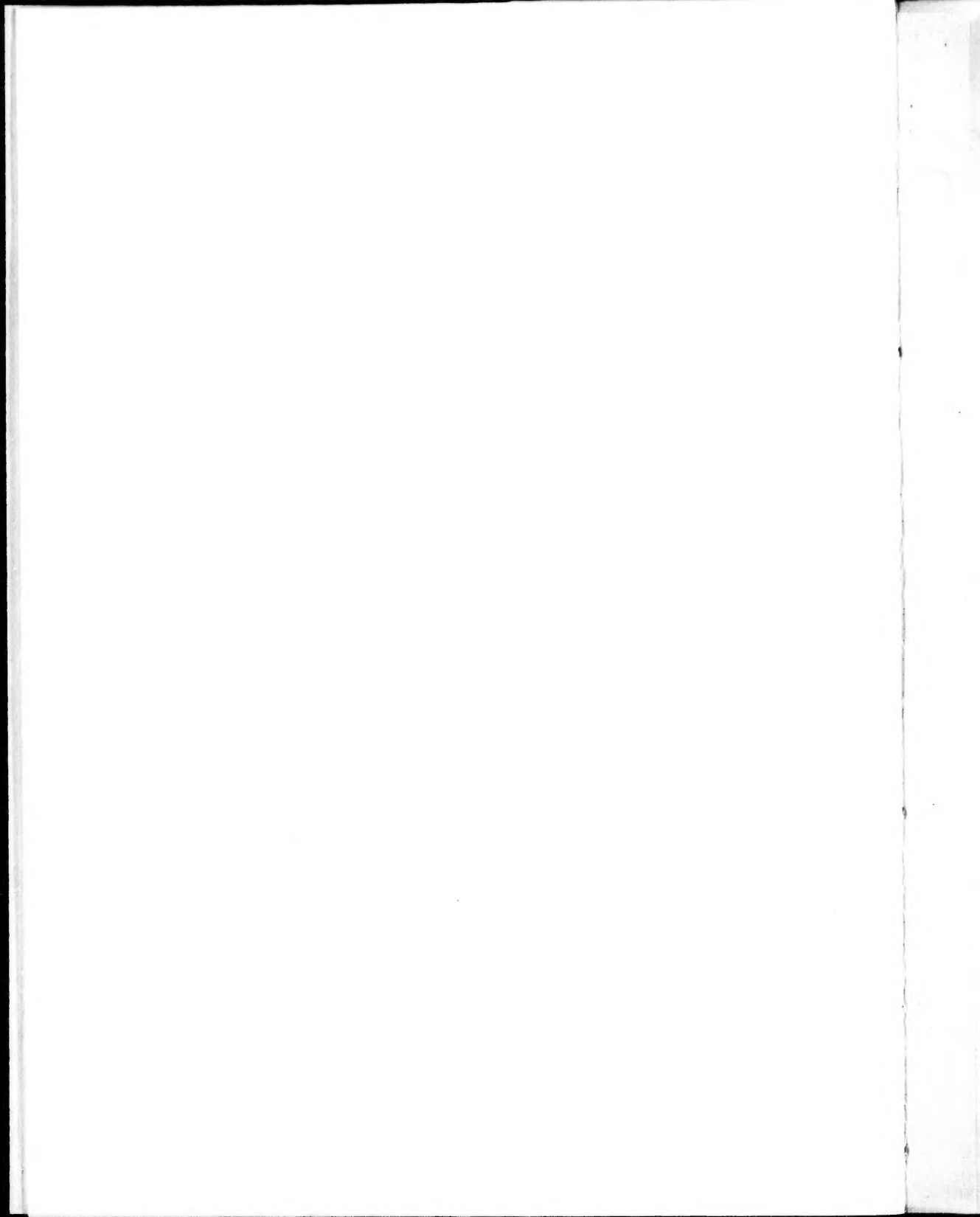
(1.) Inasmuch as it will inevitably lead to the saving of hundreds of human lives, and millions of dollars worth of property, by enabling sea-going vessels and coasting craft to escape the risks of a difficult and dangerous navigation. (2.) It will eventually reduce the entire coasting trade of New England to a system of economical barge transportation, and to a great extent make the Port of Boston the distributing centre for general merchandise, while it will cheapen the price of immense quantities of coal annually used for manufacturing and household purposes, and (3) it will immediately upon completion become a profitable source of revenue to its owners.

Bearing in mind the foregoing statements relating to the commerce of Boston, and the immense losses that have been, and still are pressing so heavily upon it, it may be taken for granted that a canal such as is now proposed to be constructed will, on account of the immunity from loss which it gives, the saving of time and economy as regards vessels expenses, be a sufficient inducement to navigators to take the benefit of all these advantages.

LOWER INSURANCE RATES—LESSENING OF VESSELS' EXPENSES.

Some of the minor but immediate benefits that are likely to follow the adoption of the new route would be: (1.) Rates of marine insurance would be lessened by navigators adopting the canal route, in consequence of the greatly lessened risk of casualty or disaster. It is the opinion of some underwriters that the present exceedingly low rates for marine insurance could not be cut down even for such safe risks as the canal would afford, but that a revival of trade would probably lead to an advance in rates for vessels that did not use the canal, and that the difference would induce owners of vessels and merchandise to prefer the short and safe route. (2.) It has been reckoned as an example of the economy of the canal route (on the basis of actual expenditure) that in the case of a steamship of 1,620 tons register, plying between Boston and New York City, the





shortening of distance by the canal route would enable it to make three (3) round trips per week, instead of two (2) as at present; what that increase of business would amount to cannot be definitely stated, but it may be estimated to be equal to nearly the gross proceeds of one trip, that would probably mean an increase ranging from 33½ to 50 per cent. of net present revenue.

COAL TRADE OF NEW ENGLAND—INFLUENCE OF CANAL ON TRADE OF BOSTON.

The anthracite coal trade of New England has attained immense proportions within the past few years. It can be shown that, between Eastport (Maine) and New London (Conn.) the deliveries of that one article by water during a single year, amounted to 4,400,000 tons. That is to say, about 900,000 tons were delivered between Eastport and Boston, not including the latter; 2,200,000 tons were brought into Boston harbour, about 600,000 tons were landed between Boston and Providence (R. I.) while 700,000 tons were delivered between Providence and New London. Of the 2,200,000 tons received at Boston, about 820,000 tons were hauled by four companies. Parties well versed in this line of business say, without hesitation, that the existence of such a canal as is contemplated would admit of the importation of large quantities of Pennsylvania anthracite at cheaper rates than heretofore, and that, of course all the water-borne coal would come by the new route. The vessels in that trade would make more trips in a season than at present, while the saving of expense would alone be a considerable profit to the owners. But the principal result would be to make Boston the great distributing centre for nearly the whole of New England. It may be mentioned here, that a new coal company is about to be organized, to be composed of influential and wealthy merchants, who contemplate establishing an immense depot upon one of the islands in the harbour, and that that enterprise will very materially augment the traffic of the canal.

COASTWISE BARGE TONNAGE WILL BE INCREASED—ENLARGEMENT OF THE BOSTON COAL MARKET.

The contemplated canal may be considered as certain to change the character of the water-borne traffic that is carried on between the two seaboard cities, New York and Boston, and make it an easy matter to introduce barge tonnage instead of much of the craft at present employed. The line of communication would practically become an inland water-way, that could be safely travelled by tows of barges, and this would lead to reduction of expenses. The influence of the canal therefore, upon the commerce of Boston can hardly be over-estimated. Much of the coal trade between the two great seaboard cities would very likely be attracted to Boston, which presents the advantage of a large distributing market, from which railways radiate in all directions, affording facilities for supplying outlying manufacturing centres at lower rates than heretofore. It is the opinion of one of the best informed business men in Boston, that the Canal when constructed, would lead to a saving to large consumers of coal equal to 50 cts. (fifty cents) a ton, the opinion also having been emphatically expressed, that the commercial advantages that would accrue would amply compensate the City of Boston, were its authorities to construct the Canal at the public expense, and to make it free from tolls to the shipping of all countries.

Incidental reference has been made to the coastwise coal-trade north-east of Boston. The craft engaged in it take of course the outside route in coming from New York or New Jersey; but the new inland route by the canal would be shorter, cheaper, and safer. There is also a large aggregate of vessel property, owned by transportation and other companies, employed between Boston and New York, as well as between ports north and south of these cities which, by their frequent passages through the canal both ways, would

contribute very much to its revenue to the extent probably of millions of tons each year. (This estimate has no reference to the tonnage owned or controlled by several influential Railway Companies, which have vested interests in routes of travel and traffic, upon which railway and steamboat transportation are combined.)

PASSENGER TRAFFIC.

It has been queried whether the Canal might lead to the establishment of a through water-route for passengers between New York and Boston, and replied to in the negative by the efficient officer of a Company, his opinion being entitled to high respect. Although the all-water route might not compete with the all-rail route between the two cities, this may not be said so certainly as regards the mixed routes, upon which there are the unpleasant transfers at night from steamboat to rail and *vice versa*. While time is money with multitudes of travellers, there is also a large number with whom comfort and convenience would certainly be taken into account. In the first instance the effect would probably be to increase the passenger lists of steamers other than the passenger lines, and ultimately lead to the establishment of at least one first class line.

CONCLUSION.

That the commercial importance and pecuniary outcome of the project which has been the subject of the foregoing paragraphs, cannot reasonably be doubted, is the clear belief of the undersigned; and that belief is founded upon the statements he has adduced, and the enquiries and investigations he has made. Of course absolute proof could not be produced in such a case, but that the legitimate inference is that the Ship Canal will be eminently successful, must be conceded, when it is remembered that the course of commerce is not dependent upon mere sentiment, but that it seeks the shortest, safest, and most economical channel. And the

undersigned sincerely hopes that the tenor of this Memorandum may have an influence upon those interested as convincing as the data upon which it is founded have been to himself.

Signed, WM. J. PATTERSON.

Montreal, 31st August, 1885.

APPENDIX TO MEMORANDUM.

If in view of the statements in the preceding Memorandum, the undersigned was required to make a more formal estimate of the first year's possible revenue of the Canal Company, it would be, on a low reckoning as follows:—

1. Aggregate entries at Boston Custom House to and from Ports South of Cape Cod, 1,798,400 tons, at 10 cts. per ton..... \$179,840
2. Coal taken into Boston Harbour, 2,200,000 at 10 cts. per ton..... \$220,000
3. Return freight by the coal vessels, say..... \$110,000
4. Coal to ports North-East of Boston, 900,000 tons at 10 cts. per ton..... \$90,000
5. Return freight from do. do. say..... \$45,000
6. Estimated miscellaneous lines referred to on page 8, say 4,500,000 tons at 10 cts. per ton..... \$450,000
7. Do. do. return trip, say..... \$225,000

\$1,319,840

This would pay 13 per cent on a capital of ten million dollars.

It will be observed in estimating return tonnage for tolls, an arbitrary reduction of 50 per cent has been made.

Signed, WM. J. PATTERSON,

Montreal, 3rd Sept. 1885.

